

Reply to Office Action dated April 30, 2008

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) An HTTP based video streaming apparatus, comprising:  
a memory ~~configured~~ to store content files received from a transmitting server;  
and  
a random access searching unit ~~configured~~ to search for a random access point in the memory, and the random access searching unit to transmit a content file request message to the transmitting server [[if]] in response to the search in the memory determining that the random access point does not exist in the memory.
- 2 (Currently Amended) The apparatus of claim 1, further comprising a display unit ~~configured to displaying display~~ the files ~~from the random access point~~ stored in the memory corresponding to the random access point.
3. (Currently Amended) The method of claim 1, wherein the memory [[is]] comprises a storage disk.
4. (Original) The apparatus of claim 1, wherein the transmitting server stores the content files as an MP4 file form according to a file fragmentation process.

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5. (Currently Amended) The apparatus of claim 4, wherein the MP4 file form comprises:

a plurality of data segments[[,]]:

a representative header associated with a first one of [[a]]the plurality of data segments; and

a plurality of segment headers, each associated with remaining ones of the plurality of data segments.

6. (Original) The apparatus of claim 1, wherein the transmitting server configures a new data stream based on the random access point requested by the random access searching unit.

7. (Currently Amended) A method of providing an HTTP based video stream for a mobile communication system, the method comprising:

~~requesting a prescribed content file from a transmitting server when a random access point required by a user is not stored in a local memory;~~

requesting a random access point for a prescribed content by a user;

determining whether the requested random access point is stored in a local memory;

transmitting a content file request message to a transmitting server when the random access point is determined to not be stored in the local memory; and

receiving a data stream from the transmitting server beginning from the random access point.

8. (Currently Amended) The method of claim 7, further comprising displaying the received content files on a display device.

9. (Currently Amended) The method of claim 8, wherein displaying the content files ~~plays~~ includes playing the files after storing the files received from the transmitting server for a prescribed period of time.

10 (Original) The method of claim 7, wherein the data stream is reconfigured based on the random access point.

11. (Currently Amended) The method of claim 7, wherein the transmitting server stores the content files ~~[[as]]~~ in a MP4 file form applied by a file fragmentation process.

12. (Canceled)

13. (Currently Amended) The method of claim 7, ~~wherein receiving the data stream comprises further comprising:~~

searching the random access point by the transmitting server upon the transmitting server receiving ~~[[a]]the~~ content file request message;

reconfiguring the data stream by setting a new data transmission starting point according to a screen type of the random access point; ~~and, and wherein receiving the data stream includes~~ receiving the reconfigured data stream as at least one TCP packet.

14. (Original) The method of claim 13, wherein the screen type is one of an I-frame and a P-frame.

15. (Original) The method of claim 13, wherein reconfiguring the data stream comprises:

determining whether the random access point is an I-frame or a P-frame;

configuring a data transmission starting point and a new media data sample based on the random access point; and

changing header information of the media data sample including the data transmission starting point.

16. (Original) The method of claim 15, wherein the header information comprises:  
time information of the media data sample; and  
meta information corresponding commonly to the respective media data samples  
of the data stream.

17. (Original) The method of claim 15, wherein changing the header information  
comprises transmitting the header information included in a header of an original media data  
sample to a header of the new media data sample, including the data transmission starting point.

18. (Original) The method of claim 15, wherein the data transmission starting point is  
equivalent to the I-frame when the random access point is the I-frame.

19. (Currently Amended) The method of claim 15, wherein configuring the media  
data sample comprises:

determining whether or not the random access point that is set as the data  
transmission starting point is the P-frame;

searching an I-frame closest to the random access point ~~[[if]]~~when the random  
access point is determined to be the P-frame and the random access point is not set as the data  
transmission starting point; and

configuring the media data sample by taking the closest I-frame as the data  
transmission starting point.

20. (Currently Amended) The method of claim 19, further comprising:

- searching the I-frame closest to the P-frame random access point;
- converting the P-frame into a new I-frame by calculating a value of the I-frame closest to the P-frame random access point and a next P-frame; and
- repeatedly converting next P-frames into new I-frames until the P-frame random access point, ~~[[if]]~~when the P-frame is set as the data transmission starting point.

21. (Original) The method of claim 19, further comprising transmitting data commencing at the closest I-frame.

22. (Currently Amended) An HTTP based video streaming method of a mobile communication system, the method comprising:

- receiving a random access request from a remote unit by a transmitting server;
- searching ~~[[the]]~~a random access point in a content file stored in the transmitting server in response to the transmitting server receiving the random access request;
- reconfiguring a data stream according to a screen type of the random access point and a coincidence between the random access point and a data transmission starting point, wherein reconfiguring the data stream comprises:
  - searching an existing I-frame closest to the random access point when the random access point is determined to be a P-frame and is the data transmission starting point,

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converting the P-frame into a new I-frame by calculating values of the existing I-frame and a next P-frame,

repeatedly performing the converting until the next P-frame is the random access point to convert the P-frame random access point into a final new I-frame,

configuring the media data sample having the final new I-frame as the data transmission starting point,

configuring the new data stream using the media data sample and the continuous media data samples, and

changing a first header information of the new data stream; and

transmitting the reconfigured new data stream to the remote unit.

23. (Currently Amended) The method of claim 22, wherein the content file in the transmitting server is an MP4 file applied by a file fragmentation process, and the data stream includes a plurality of media data samples and a plurality of headers of the respective media data samples.

24. (Original) The method of claim 23, wherein the plurality of headers comprises:  
a representative header including common meta information of the respective media data samples and time information of a first media data sample; and  
at least one segment header including time information of the respective media data samples except the first media data sample.

25. (Original) The method of claim 22, wherein the screen type comprises one of an I-frame and a P-frame.

26. (Currently Amended) The method of claim 22, wherein reconfiguring the data stream comprises:

determining whether ~~or not~~ the random access point is an I-frame or a P-frame;

configuring the media data sample having the random access point as the data transmission starting point when the random access point is determined to be the I-frame;

configuring a new data stream using the media data sample and continuous media data samples; and

changing header information of a first media data sample segment.

27. (Currently Amended) The method of claim 26, further comprising one of converting the ~~P-frame~~ P-frame to a new I-frame and setting an I-frame closest to the P-frame as the data transmission starting point, when ~~it is determined that~~ the random access point is determined to be the P-frame.

28. (Currently Amended) The method of claim 26, wherein the header information further comprises meta information ~~which~~ that is common for the media data samples.

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29. (Currently Amended) The method of claim 22, wherein reconfiguring the data stream comprises:

searching an I-frame closest to the random access point ~~[[if]]~~when the random access point is determined to be a P-frame and the random access point is not set as the data transmission starting point;

configuring a media data sample having the I-frame as the data transmission starting point;

configuring a new data stream using the media data sample and the continuous media data samples; and

changing a first header information of the new data stream.

30-32. (Canceled)

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33. (Currently Amended) An HTTP based video streaming method in a random access method of a data stream including a plurality of headers having a plurality of media data samples and time information for the media data samples, comprising:

searching an I- frame closest to a P-frame random access point ~~required~~requested by a user;

converting a next P-frame ~~which~~that is adjacent to the I-frame into a new I-frame ~~through~~by calculating using the next P-frame ~~[[an]]~~and the I-frame;

configuring a media data sample by setting the new I-frame as a data transmission starting point after converting the P-frame random access point into the new I-frame; and

changing header information of the media data sample.

34. (Original) The method of claim 33, wherein changing the header information comprises transmitting meta information of respective media data stored in the first header before changing to the changed first header.